

INTERNATIONAL SEARCH REPORT

Application No

PCT/GB 03/03175

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D239/48 C07D239/69 C07D401/12 C07D403/12 C07D405/12
C07D409/12 C07D413/12 C07D413/14 C07D417/12 A61K31/5377
A61K31/506 A61P11/00 A61P29/00 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1 042 295 A (CHUGAI PHARMACEUTICAL CO LTD) 14 September 1966 (1966-09-14) page 2, column 2, line 35 - line 37; claims 1,11; example 20 ---	1,2,5,8
X	WO 01 25242 A (HUNT SIMON FRASER ;WALTERS IAIN ALISTAIR STEWART (GB); ASTRAZENECA) 12 April 2001 (2001-04-12) page 12, line 28 -page 14, line 22; claims 1-6,10-19; examples 6,10 ---	1-21
X	WO 00 09511 A (ASTRA PHARMA PROD ;KINCHIN ELIZABETH (GB); AUSTIN RUPERT (GB); BAX) 24 February 2000 (2000-02-24) page 30, line 3 -page 32, line 4; claims 1-7,11-17; examples 231-235,272,294,295 --- -/--	1-21

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

16 October 2003

Date of mailing of the international search report

04/11/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 58906 A (BONNERT ROGER ;HUNT FRASER (GB); WILLIS PAUL (GB); ASTRAZENECA AB) 16 August 2001 (2001-08-16) page 12, line 21 -page 15, line 12; claims 1-7,9-17; examples -----	1-21

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

It is noted that the application refers to "prodrugs" and "in vivo hydrolysable esters". Both are functional definitions which attempt to define a chemical compound in terms of a result to be achieved. This is not allowable (Article 6 PCT). The said terms have not been searched and should be deleted. "Prodrugs" and "in vivo hydrolysable esters" are functional definitions without a specific technical guidance for the selection of the suitable derivatives in the description and without proven general knowledge to show which derivatives are suitable prodrugs or which esters are indeed hydrolysable under in vivo conditions. The term could be seen as a mere invitation to the skilled person to perform a research program in order to find the suitable variants. Page 5, line 33-page 6, line 2 confirms this by stating "such esters can be identified by administering intravenously to a test animal the compound under test and subsequently examining the test animal's body fluid". In such a situation, when the invention cannot be carried out over the whole claimed area without imposing an undue burden, the disclosure may be considered insufficient in the sense of Article 5 PCT, even when simple in vivo or in vitro tests are available to determine whether or not a particular compound is covered by the claims.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Application No

PCT/GB 03/03175

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1042295	A	14-09-1966	BE 641881 A	16-04-1964
			CH 460022 A	31-07-1968
			DE 1445609 A1	09-01-1969
			FR 3106 M	
			FR 1383287 A	24-12-1964
			NL 127990 C	
			NL 302745 A	
			US 3328395 A	27-06-1967
WO 0125242	A	12-04-2001	AU 7304900 A	10-05-2001
			BR 0014334 A	11-06-2002
			CA 2385269 A1	12-04-2001
			CN 1402730 T	12-03-2003
			CZ 20021113 A3	12-06-2002
			EE 200200174 A	15-04-2003
			EP 1222195 A1	17-07-2002
			EP 1348709 A2	01-10-2003
			WO 0125242 A1	12-04-2001
			HU 0204246 A2	28-04-2003
			JP 2003511384 T	25-03-2003
			NO 20021448 A	22-05-2002
			NZ 517880 A	26-09-2003
WO 0009511	A	24-02-2000	AT 231872 T	15-02-2003
			AU 5662599 A	06-03-2000
			CA 2338600 A1	24-02-2000
			DE 69905170 D1	06-03-2003
			DK 1104425 T3	23-06-2003
			EP 1104425 A1	06-06-2001
			ES 2190246 T3	16-07-2003
			JP 2002522544 T	23-07-2002
			NZ 509457 A	26-07-2002
			WO 0009511 A1	24-02-2000
WO 0158906	A	16-08-2001	GB 2359079 A	15-08-2001
			GB 2359080 A	15-08-2001
			AU 3255601 A	20-08-2001
			EP 1257555 A1	20-11-2002
			JP 2003522191 T	22-07-2003
			WO 0158906 A1	16-08-2001